

IN THE CLAIMS:

Claims 1-52 (cancelled).

Claim 53 (currently amended) A water insoluble bead comprising droplets of an oil in water emulsion in a polymer matrix, wherein ~~said polymer matrix comprises a protein and a polysaccharide and~~ the oil in water emulsion comprises at least one volatile hydrophobic component, a surface active agent and water, the volatile hydrophobic component, surface active agent and polymer matrix being selected and being present in the bead such that the bead is storable in water without release of the volatile component and such that the volatile component is released from said water insoluble bead in atmospheric air.

Claim 54 (cancelled)

Claim 55 (currently amended) The water insoluble bead according to claim 53, wherein the polymer matrix comprises a protein and a polysaccharide and said protein is selected from the group consisting of gelatin, albumin, casein and lactoglobulin.

Claim 56 (currently amended) The water insoluble bead according to claim ~~55~~ 53, wherein the polysaccharide is selected from the group consisting of sodium alginate, carraggenan, guar gum, locus bean gum, chitosan, pectin and carboxy methyl cellulose.

Claim 57 (previously presented) The water insoluble bead according to claim 53, wherein said surface active agent is selected from the group consisting of a protein, a monomeric surfactant and a polymeric surfactant.

Claim 58 (previously presented) The water insoluble bead according to claim 53, wherein said surface active agent is selected from the group consisting of ethoxylated sorbitan ester, alkyl ether, a block copolymer and gelatin.

Claim 59 (previously presented) The water insoluble bead according to claim 53, wherein said bead is of a size between 0.5 micron and 1 mm.

Claim 60 (previously presented) The water insoluble bead according to claim 53, wherein said bead is of a size between 5 and 80 microns.

Claim 61 (previously presented) The water insoluble bead according to claim 53, wherein said volatile component is a material that has an effect on a living organism.

Claim 62 (previously presented) The water insoluble bead according to claim 53, wherein said volatile component is a pheromone.

Claim 63 (previously presented) The water insoluble bead according to claim 62, wherein said pheromone is selected from the group consisting of grandlure, muscalure, gossyplure and disparlure.

Claim 64 (withdrawn) The water insoluble bead according to claim 53, wherein said volatile component is an essential oil.

Claim 65 (withdrawn) The water insoluble bead according to claim 53, wherein said volatile component is a pesticide.

Claim 66 (withdrawn) The water insoluble bead according to claim 53, wherein said volatile component is an attractant.

Claim 67 (withdrawn) The water insoluble bead according to claim 66, wherein said attractant is selected from the group consisting of eugenol, benzyl alcohol, leaf alcohols, aldehydes and acetates.

Claim 68 (withdrawn) The water insoluble bead according to claim 53, wherein said volatile component is an attractant inhibitor.

Claim 69 (withdrawn) The water insoluble bead according to claim 68, wherein said attractant inhibitor is selected from the group consisting of (Z)-9-tetradecenyl formate and (E,E)-10, 12-hexadecadienol.

Claim 70 (previously presented) The water insoluble bead according to claim 53, wherein said volatile component is present in an amount of up to 50% wt/wt.

Claim 71 (previously presented) The water insoluble bead according to claim 53, wherein said volatile component is present in an amount of up to 20% wt/wt.

Claim 72 (currently amended) The water insoluble bead according to claim ~~55~~ 53, wherein said protein is a gelatin.

Claim 73 (previously presented) The water insoluble bead according to claim 72, wherein said gelatin is a type B gelatin.

Claim 74 (withdrawn) The water insoluble bead according to claim 53, wherein said volatile component is eugenol.

Claim 75 (previously presented) The water insoluble bead according to claim 53, further comprising tannic acid in an amount effective to provide a release rate of the volatile component from said bead in atmospheric air that is slower than a release rate of the volatile component from the bead in atmospheric air without the tannic acid.

Claim 76 (previously presented) A process for preparing a sustained-release dispersion of a plurality of water insoluble beads according to claim 53 for release of the volatile hydrophobic component therefrom in atmospheric air, comprising:

- a) preparing an oil/water emulsion by homogenizing the volatile hydrophobic component in water, using at least one surface active molecule;
- b) mixing said emulsion with at least one water-soluble polymer and optionally

rehomogenizing the mixture;

c) adding the emulsion prepared in step (b) in a dropwise manner into a gellant solution to form said water insoluble beads;

d) recovering the water insoluble beads from the gellant solution; and

e) storing the recovered beads in water.

Claim 77 (previously presented) A process according to claim 76, further comprising the step of chemically cross-linking polymers present in said composition.

Claim 78 (previously presented) A process according to claim 76, further comprising the step of drying said beads.

Claim 79 (previously presented) A process according to claim 76, wherein said gellant solution is selected from the group consisting of an electrolyte solution and a multivalent ion solution.

Claim 80 (previously presented) A process according to claim 76, wherein said volatile component is a bioactive material.

Claim 81 (previously presented) A process according to claim 76, wherein said volatile component is a pheromone.

Claim 82 (previously presented) A process according to claim 81, wherein said

pheromone is selected from the group consisting of grandlure, muscalure, gossyplure and disparlure.

Claim 83 (withdrawn) A process according to claim 76, wherein said volatile component is an essential oil.

Claim 84 (withdrawn) A process according to claim 76, wherein said volatile component is a pesticide.

Claim 85 (withdrawn) A process according to claim 76 wherein said volatile component is an attractant.

Claim 86 (withdrawn) A process according to claim 85, wherein said attractant is selected from the group consisting of eugenol, benzyl alcohol, leaf alcohols, aldehydes and acetates.

Claim 87 (withdrawn) A process according to claim 76, wherein said volatile component is an attractant inhibitor.

Claim 88 (withdrawn) A process according to claim 87, wherein said attractant inhibitor is selected from the group consisting of (Z)-9-tetradecenyl formate and (E,E)-10, 12-hexadecadienol.

Claim 89 (previously presented) A process according to claim 76, wherein said volatile component is present in an amount of up to 50% wt./wt.

Claim 90 (previously presented) A process according to claim 76, wherein said volatile component is present in an amount of up to 20% wt./wt.

Claim 91 (previously presented) A process according to claim 76, wherein said surface active molecule is a gelatin.

Claim 92 (previously presented) A process according to claim 91, wherein said gelatin is a type B gelatin.

Claim 93 (previously presented) A process according to claim 76, wherein said gellant is an aqueous metal salt solution.

Claim 94 (previously presented) A process according to claim 93, wherein said aqueous metal salt solution comprises a divalent or trivalent metal salt.

Claim 95 (previously presented) A process according to claim 93, wherein said metal salt solution comprises chlorides and acetates of calcium, barium and copper.

Claim 96 (previously presented) A process according to claim 76, wherein the emulsion of step (b) is sprayed into said gellant to form micron-sized beads.

Claim 97 (previously presented) A process according to claim 76, wherein said polymer is a polysaccharide.

Claim 98 (previously presented) A process according to claim 97, wherein said polysaccharide is an alginate.

Claim 99 (previously presented) A process according to claim 98, wherein said alginate is a water-soluble salt of alginic acid.

Claim 100 (previously presented) A process according to claim 98, wherein said alginate is a water-soluble salt of organic bases.

Claim 101 (previously presented) A process according to claim 98, wherein said alginate is selected from the group consisting of sodium, potassium, magnesium, ammonium alginate and amines.

Claim 102 (previously presented) A process according to claim 98, wherein said alginate is present in an amount of about between 0.1 and 5% wt./wt.

Claim 103 (previously presented) A process according to claim 98, wherein said alginate is present in an amount of about between 1 and 1.5% wt./wt.

Claim 104 (previously presented) A dispersion comprising a plurality of water



insoluble bead products and water, each of said water soluble bead products consisting of the water insoluble bead of claim 53.

Claim 105 (withdrawn) A method for the sustained release of a volatile material comprising the steps of:

- a) providing the water insoluble bead of claim 53; and
- b) exposing the water insoluble bead to atmospheric air to cause a sustained release of the volatile hydrophobic component.

Claim 106 (withdrawn) A method for treating a volatile material comprising the steps of:

- a) providing the water insoluble bead of claim 53; and
- b) storing the water insoluble bead in water to prevent release of the volatile material.

Claim 107 (previously presented) The water insoluble bead according to claim 54, wherein the oil in water emulsion comprises both a gelatin and an alginate.

Claim 108 (cancelled).

Claim 109 (new). A water insoluble bead comprising droplets of an oil in water emulsion in a polymer matrix, wherein the oil in water emulsion comprises at least one volatile component, a surface active agent and water, the volatile hydrophobic

component, surface active agent and polymer matrix being present in the bead such that the bead is storable in water without release of the volatile component and such that the volatile component is released from said water insoluble bead in atmospheric air, the surface active agent comprising gelatin.

Claim 110 (new). The water insoluble bead according to claim 109, wherein the polymer matrix comprises an alginate.

Claim 111 (new). The water insoluble bead according to claim 110, wherein the water insoluble bead consists essentially of the volatile hydrophobic component, the gelatin and the alginate.

Claim 112 (new). The water insoluble bead according to claim 110, wherein the volatile hydrophobic component, surface active agent and polymer matrix are such that the volatile component is released from the water insoluble bead in atmospheric air over a period comprising a plurality of hours.

Claim 113 (new). The water insoluble bead according to claim 110, wherein the volatile hydrophobic component, surface active agent and polymer matrix are such that the volatile component is released from the water insoluble bead in atmospheric air over a period comprising a plurality of days.